

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>9589WO/NW</b>	<div style="display: flex; justify-content: space-between;"> <div>FOR FURTHER ACTION</div> <div>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div> </div>	
International application No. <b>PCT/IB 2004/004220</b>	International filing date (day/month/year) <b>20 December 2004</b>	(Earliest) Priority Date (day/month/year) <b>22 December 2003</b>
Applicant <b>ABB AS et al</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (see Box No. II)

3. ☐ Unity of invention is lacking (see Box No. III)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 9

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 2004/004220

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: B25J 9/16, G05B 19/418, G05B 19/42

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: B25J, G05B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTENAL, WPI, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5204942 A (N.OTERA ET AL), 20 April 1993 (20.04.1993), column 3, line 17 - line 62, figures 1-3,6	1
Y	--	2-44
Y	US 20030050734 A1 (LAPHAM, JR), 13 March 2003 (13.03.2003), pag.2[0027]-[0029];pag.3[0045] pag.4[0052]-[0056],fig.1,abstract	2-44
Y	US 6347253 B1 (N.FUJITA ET AL), 12 February 2002 (12.02.2002), column 1, line 55 - line 67; column 4, line 13 - line 54, figures 1-4, abstract	2-44
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☒ Further documents are listed in the continuation of Box C.
 ☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"B" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

4 May 2005

Date of mailing of the international search report

13 -05- 2005

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 Swedish Patent Office  
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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 2004/004220

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3654616 A (M.DUNNE ET AL), 4 April 1972 (04.04.1972), column 3, line 7 - line 26; column 4, line 18 - line 29; column 5, line 11 - line 51, col.9, li.16-31, li.44-53, fig.1-3, abstract  ----- --	1-44

INTERNATIONAL SEARCH REPORT  
Information on patent family members

01/04/2005

International application No.

PCT/IB 2004/004220

US	5204942	A	20/04/1993	DE	68926442	D,T	26/09/1996
				EP	0377939	A,B	18/07/1990
				JP	2095111	U	30/07/1990
				JP	2182688	A	17/07/1990
				JP	2095112	U	30/07/1990
				JP	2185384	A	19/07/1990
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US	20030050734	A1	13/03/2003	US	6675070	B	06/01/2004
				US	20040153213	A	05/08/2004
				CA	2433503	A	11/07/2002
				CN	1484807	A,T	24/03/2004
				EP	1352357	A	15/10/2003
				JP	2004524171	T	12/08/2004
				US	6442451	B	27/08/2002
				US	20020087232	A	04/07/2002
				WO	02054329	A	11/07/2002
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US	6347253	B1	12/02/2002	JP	11039018	A	12/02/1999
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US	3654616	A	04/04/1972	NONE			
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